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March 4, 1996

BY HAND DELIVERY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: Ex Parte Presentation
CC Docket No. 92-297

Dear Mr. Caton:

On March 4, 1996, Teledesic Corporation ("Teledesic") made a written ex parte presentation in CC Docket No. 92-297, by submitting a copy of the attached document, Local Multipoint Communications Systems (LMCS) In The 28 GHz Range to Don Gips, Deputy Chief, International Bureau.

Pursuant to Section 1.1206(a)(1) of the Commission's Rules, an original and two copies of this letter and its attachment are enclosed. A copy of this letter and its attachment is also being provided to the FCC staff indicated above.

Very truly yours,

Jennifer A. Manner

cc: Mr. Don Gips

LOCAL

MULTIPOINT COMMUNICATION

SYSTEMS (LMCS)

IN THE 28 GHZ RANGE:

Policy, Authorization Procedures and Evaluation Criteria

Table of Contents

1. Building a More Competitive Communications Marketplace

The purpose of this document is to set out the policy, evaluation criteria and phased authorization process for the implementation of Local Multipoint Communications Systems (LMCS) in the 28 GHz frequency range. This document initiates a process for awarding radio authorizations under the Radiocommunication Act.

LMCS can be characterized as wireless broadband distribution systems, operating in a cellular fashion, possibly providing an array of video, data and telephony services directly to residential and business subscribers. These broadband local distribution networks will act as local telecommunications common carriers and will be able to carry basic and advanced communications, multimedia and broadcasting services.

1.1 Within Canada

Canadians are currently served by two local distribution networks providing a range of broadcast and telecommunications services to consumer and business clients-the local cable TV network and the local telephone network. With advancements in the technologies used by each industry to deliver their services and ongoing change in the regulatory framework, soon each will be able to provide the others core services thereby offering a full range of services to consumers on a competitive basis. A key aim of the policy measures being adopted by Industry Canada is to foster diversity of choice for Canadian consumers and businesses among an expanded range of broadband local distribution networks. In announcing the policy and authorization procedures for Local Multipoint Communications Systems, it is the intention of the government to permit the establishment of a third local distribution network for broadcasting and telecommunications services which will be fully competitive with existing networks and offer another choice to consumers. The implementation of LMCS will advance competition in the local communications marketplace, stimulate economic growth, job creation and promote the development of innovative new technologies and services. One indicator of the economic benefits from the introduction of this new technology is the expected creation of 1400-1900 new jobs within the first 18 months.

1.2 World Leadership

The authorization of LMCS also offers Canadian companies the opportunity to showcase for the world market early implementation of advanced wireless technologies. Canadian companies with expertise in building or operating LMCS will contribute to the maintenance of Canada's world leadership in wireless technologies. This, in turn, will enhance opportunities for export of both goods and services to a world-wide market.

2. Background

On December 24, 1994, Industry Canada issued Gazette Notice DGTP-013-94 entitled ***Proposed Spectrum Policy to Accommodate Microwave Radio Systems, Including Local Wideband Distribution and Advanced Communication Satellites In Certain Bands Above 20 GHz.*** This Notice invited comments on a number of issues relating to the frequency bands 22, 28 and 38 GHz, including the types of radio system applications in the areas of satellite and terrestrial microwave communications including LMCS. It also outlined general telecommunications policy objectives that would be pursued by Industry Canada.

Among the matters raised for public comment regarding the implementation of LMCS were:

i. suitable frequency band;

ii. amount of spectrum and number of frequency blocks;

iii. sustainable competition and innovative applications; and

iv. approach for the authorization of LMCS under the Radiocommunication Act.

In response to Notice DGTP-013-94, twenty-five submissions were received. Some of the key points that prevailed in the consultation process include the following:

i. LMCS technologies and services may evolve considerably over the next few years

ii. the use of the 27-28 GHz band, with expansion below 27 GHz, was preferred to other spectrum options

iii. approximately 1 GHz of spectrum would be required for the initial deployment of a Local Multipoint Communications System

iv. the introduction of LMCS in Canada is expected to bring manufacturing and systems development opportunities both in Canada and in foreign markets

Also during the past two years, Industry Canada has authorized a number of experimental licences to assess technology and distribution capabilities. Both the public submissions and the results of the field trials were given careful consideration in developing this policy.

3. General Telecommunications Policy

The Minister, in exercising his powers under the Radiocommunication Act, may have regard to the policy principles set out in the Telecommunications Act. The Telecommunications Act establishes several objectives of particular relevance to wireless services such as LMCS. These objectives include:

i. enhancing the efficiency and competitiveness, at the national and international levels, of Canadian telecommunications;

ii. to foster increased reliance on market forces for the provision of telecommunications services; and,

iii. stimulating research and development in Canada in the field of telecommunications and encouraging innovation in the provision of telecommunications services.

As well, the Department has been guided by the objectives of the government's Information Highway strategy.

Wireless communications are expected to play key roles in advancing the capability of Canada's Information Highway. They promise to provide commercially viable, competitive alternatives to the existing and planned local distribution networks of telephone and cable TV companies. LMCS is expected to support the provision of innovative services such as interactive television and high speed access to the Internet. LMCS may also provide alternative means of augmenting the capacity of existing telecommunications and broadcasting distribution networks.

It should be noted that entities which own or operate wireless transmission facilities and provide telecommunications services to the public for compensation, including LMCS, are generally subject to regulation by the CRTC under the Telecommunications Act. While distribution of broadcasting services is an application for which LMCS may be particularly well suited, applicants are cautioned that an award of a radio authorization for LMCS does not convey any rights under the Broadcasting Act.

It is expected that many of the telecommunications services carried on LMCS may require interconnection to public telecommunications networks. The CRTC, and in Saskatchewan, the relevant provincial authority, are responsible for approving the terms and conditions of interconnection for access to the public networks.

Interconnection standards will be required to facilitate the interconnection with public switched network. The Terminal Attachment Program Advisory Committee (TAPAC) will be asked to develop any necessary standards.

In creating this new broadband access facility of the Information Highway Infrastructure for Canada, due regard will be given to the requirement for interconnection between networks to result in the "network of networks" objective of the Information Highway.

Canadians have clearly expressed, in a number of fora, that they value their privacy. The possible use of radiocommunications (in LMCS) to effect the link between the communications of individual consumers and the conventional public switched telephone network (or other networks) has obvious ramifications for the privacy concerns of users, as evidenced most recently in the cellular area. LMCS provides an opportunity to introduce a relatively high level of privacy protection for both voice, video and data applications through the creative use of encryption and addressability.

4. Frequency Band for Local Multipoint Communication Systems

4.1 Spectrum Considerations

Gazette Notice DGTP-013-94 indicated that Industry Canada intended to designate sufficient frequency spectrum above 20 GHz for LMCS applications, having due regard for other radio services that may share this spectrum. Industry Canada invited comment on a proposal that suggested the 27-28 GHz band be designated as a core band for LMCS and that expansion for LMCS take place above and/or below this band. Except for a concern expressed regarding the sharing with the inter-satellite service in 25.25-27.5 GHz band, the development of LMCS in this band was viewed positively.

Some comments suggested that Canada await the conclusion of the U.S. Federal Communications Commission (FCC) rulemaking on Local Multipoint Distribution Service (LMDS) because alignment of spectrum allocations with the U.S. could have economic and technical benefits. Some strong opposition to the implementation of LMCS in part of the 27.5-29.5 GHz (Ka band) was registered by potential future users of the spectrum for fixed satellite networks and feeder links for mobile satellite networks. These concerns relate to sharing difficulties with terrestrial LMCS operations, and the future satellite needs in the higher portion of the Ka band.

In general, there was support for the use of the core band 27-28 GHz and the spectrum below 27 GHz (ie 25.25-27 GHz) for LMCS while taking into account inter-satellite service operation. The implementation of high density LMCS will be mainly in

urban centres and subject to the power limits and operational requirements of the International Radio Regulations of the ITU.

4.2 Spectrum Policy for LMCS in the 28 GHz Band

The spectrum designated for LMCS applications will be essentially for high capacity multipoint communications systems having unidirectional and/or bidirectional transmission coverage over local areas providing wide access to residential and business customers. LMCS makes extensive use of cellular design for efficient frequency re-use and, depending on the technology, may transmit over line-of-sight and/or reflective paths.

Industry Canada, having given consideration to both the need to make a significant amount of spectrum available for the development of a diversity of local multipoint communications systems as defined above, and to the number of potential operators, is designating the band 25.35-28.35 GHz for the development of LMCS in Canada. This spectrum is divided into six frequency blocks of 500 MHz. The band 25.35-28.35 GHz will allow authorized entities to provide service in local areas and will support the spectrum requirements of more than one service provider.

The frequency plan and block availability adopted for LMCS are as follows:

Block A	500 MHz	27.85-28.35 GHz	
Block B	500 MHz	27.35-27.85 GHz	
Block C	500 MHz	26.85-27.35 GHz	(reserved)
Block D	500 MHz	26.35-26.85 GHz	(reserved)
Block E	500 MHz	25.85-26.35 GHz	(reserved)
Block F	500 MHz	25.35-25.85 GHz	(reserved)

During Round One of authorization, Industry Canada will consider applications for two blocks of 500 MHz (blocks A and B). The remaining four blocks (C, D, E, and F) will be reserved for a period of time not less than 18 months nor more than 36 months after the authorization of blocks A and B for future development of LMCS systems. In determining the amount of spectrum that will be released at this time for Round One, the Department has been mindful that the regulatory framework for local competition in telecommunications and broadcasting is still under development. As well, adaptation of technology is required for LMCS in the lower part of the spectrum. Hence Industry Canada considers it reasonable to open only two blocks of 500 MHz to authorization at this time.

4.3 General Conditions

4.3.1 LMCS providing interactive or two-way services will operate both forward and return communications links within the assigned block(s) of spectrum.

4.3.2 LMCS technologies are being developed which promise to deliver a wide range of services in a reliable and cost effective manner. The technology to be implemented will depend on the system design and the telecommunications and broadcasting services being carried. Thus, Industry Canada will not mandate technical requirements except to facilitate coordination between LMCS and between LMCS and inter-satellite links where they share spectrum. For such coordination Industry Canada has established the technical criteria provided in Appendix A. Further, Industry Canada will not mandate the types of services to be carried by LMCS providers other than the proposed system must be a high capacity, broadband multipoint system.

4.3.3 Fixed satellite earth stations may have access to the 27.5-28.35 GHz frequency range outside LMCS market areas subject to spectrum sharing conditions.

5. Authorization Policy for LMCS

Having considered the policy objectives set out in Section 3, the following policy determinations, of both broader and more specific application, are directed towards the provision of LMCS within Canada in the spectrum defined in Section 4.

5.1 Round One: Spectrum Available for Authorization

At this time, Industry Canada will make spectrum blocks A and B available for authorization through a comparative selection and authorization process . The remaining spectrum blocks C, D, E and F will not be authorized for commercial use at this time. These spectrum blocks are available, however, without prejudice to future authorization, for experimentation relating to LMCS on a first-come, first-served basis. Industry Canada encourages interested parties to pursue non-commercial experimentation in these spectrum blocks to advance LMCS technologies and services.

5.2 Round Two: Spectrum Available for Authorization

It is the Department's intention to initiate a subsequent competitive bidding (auction) process for some or all of these remaining spectrum blocks. The timing of this process will be a function of several considerations including the results of this current proceeding, expected policy and regulatory developments with respect to convergence, expressed demand, technological and service developments, and the progress made by the Department in establishing the necessary arrangements to support auctioning. The process of Round Two authorization for the assignment by auction of some or all of blocks C, D, E, and F will commence no earlier than 18 months and no later than 36 months after the completion of authorization of blocks A and B in Round One.

5.3 Service Areas

Industry Canada has defined sixty-six (66) service areas in which spectrum blocks A and B are available for authorization. A list of these areas with their corresponding number of households and authorization fee is provided in Table 1 of Appendix B. Graphic descriptions of the service areas are also provided in Appendix E.

Applicants may also be interested in providing service to areas not listed in Appendix B (see maps at Appendix/annexe E) and may so apply. In such instances, applicants must include a detailed description of the proposed additional service areas with their submissions. These areas must not include any portion of the aforementioned sixty-six (66) service areas. Such service areas must be entirely outside the boundaries of the sixty-six service areas set out in Appendix B.

5.4 Eligibility

The local wireline distribution networks of the telephone and cable TV companies are well established in most Canadian communities. Some of these companies have concrete plans to evolve their local distribution networks with fibre optic and advanced cable transmission technology to deliver a full range of telecommunications, multi-media and broadcasting services. As indicated in section 4.2 in releasing blocks A and B, the Department is mindful that the regulatory framework to set the rules for full competition in the local distribution market in which the telephone companies and cable operators may compete with each other is being developed. The CRTC has indicated in its report to Government on convergence (Competition and Cultural on Canada's Information Highway: Managing the Realities of Transition)with respect to broadcasting distribution that "..applications from other potential distributors should be considered without delay. Such applications could involve DTH, Microwave Distribution System (MDS) or other distribution technologies." The existing local network operators with their resources and infrastructure in place could realize economies of scale, and move quickly to integrate their wireline facilities with new wireless facilities. This would not, however, foster the

development of a third service delivery force to provide consumers more choice of facility providers, more competition and service innovation.

It was emphasized by the cable industry that LMCS used as a broadcasting distribution should be subject to similar requirements as cable service under the Broadcasting Act. The telephone companies expressed the need for all participants in the LMCS market be treated equally. The argument has been put forward by potential new entrants that the regulatory regime is in place now for competition in local distribution networks to begin with the implementation of LMCS technology. Thus the Department should introduce measures to enable new entrants to develop the capability to compete with the existing established local networks.

The Department has designated sufficient spectrum for a number of wireless LMCS distribution systems. To foster diversity and choice for Canadian consumers and businesses among local distribution networks and to permit the establishment of an alternative and competitive third force in the local distribution marketplace, two blocks of 500 MHz spectrum have been made available for new entrants at this time.

Having consideration to the objectives outlined in Section 3, the issues discussed above and the public benefit of providing Canadians with greater choice of service facility providers, an entity will be eligible to be authorized to provide LMCS at 28 GHz for blocks A and B as part of this call for applications if the entity, including its affiliates[1], is not either

i. a telecommunication common carrier which provides local exchange telephone service anywhere in Canada; or

ii. licensed to carry on a cable distribution undertaking under the Broadcasting Act anywhere in Canada.

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[1] affiliate is defined in the same general manner as in subsection 35(3) of the Telecommunications Act; viz. a person who controls the entity, or who is controlled by the entity or by any person who controls the entity."

5.5 Round One: Fees

Industry Canada is of the view that fees should reflect the economic value of the radio frequency spectrum resource consumed. However, in the absence of a market-based mechanism by which the economic value would be revealed, the Department recognizes that such determinations are difficult.

Industry Canada proposes an annual authorization fee of $0.50 per household per 500 MHz spectrum block in each service area. It is further proposed that at the time of authorization the applicant pay 20% ($.10 per household) of the authorization fee that corresponds to those blocks in each service area for which the applicant is authorized.

Further, applicants must submit, with their Phase II Detailed Submission, a non-revocable financial instrument such as a letter of credit with a value of 20% of the total value of the authorization fee that corresponds to the blocks in each service area for which application is being made. The financial instrument will only be drawn upon if default of the initial authorization fee occurs and only in the amount that corresponds to 20% of the authorization fee for the blocks authorized in each service area. The financial instrument will be returned to those who are unsuccessful. The balance of the authorization fee ($0.40 per household) for the blocks authorized in each service area is due within 30 days of the Minister's announcement of selection for authorization. Thereafter, the annual fees will be due on April 1st of each year.

The Department notes that new spectrum-based technologies have significant potential to compete with non-spectrum based (e.g. copper twisted-pair, coaxial and fibre optic cable) technologies in the provision of telecommunications and broadcasting services. Further, the Department is concerned that the choice of technologies not be distorted by the availability of spectrum at a cost that is not representative of the opportunity cost associated with its use.

Interested parties are therefore invited to comment in the Phase I of the authorization process, described in Section 6.4, on the appropriateness of the proposed interim fee. At such time as Industry Canada has available to it a market determined valuation, as is expected at the conclusion of the competitive bidding process for the remaining blocks, this interim fee will be adjusted accordingly.

5.6 Radio Station Licences

Site specific radio station licences will not be required for each hub site of the proposed system. However, successful applicants must obtain all other appropriate approvals associated with sites including, as applicable, antenna structure clearance, and environmental, radiofrequency fields and land-use consultation. Licences for subscriber equipment will not be required if it conforms to appropriate Industry Canada regulations and technical standards.

5.7 Ownership and Control

The applicant must comply with the Canadian carrier eligibility criteria as set out in section 16 of the Telecommunications Act and in the Canadian Telecommunications Common Carrier Ownership and Control Regulations.

5.8 Transfer of Authorizations

Consistent with general policy in this area and the specific provisions of section 18 of General Radio Regulations, Part II, the transfer of an authorization to another party will not be allowed without a full review of the application by Industry Canada and approval by the Minister. In the absence of exceptional circumstances, no transfer of authorization will be permitted in the first three years after the award of an authorization to provide LMCS is granted.

6. Round One: Selection Process for Blocks A and B

Due to interest already expressed, it is anticipated that the demand for blocks A and B in certain service areas will result in mutual exclusivity in application. Consequently, a comparative, three phase selection and authorization process will be used to introduce LMCS in Canada.

Applicants should be familiar with the policy provisions outlined in the preceding sections and the criteria outlined below. These should be used as a guide in the preparation of their submissions. The information requested and the measures to conform with the policy should be clearly reflected and identified in the submissions. Applicants should demonstrate in their submissions what measures they will take to comply with the policy if successful in the authorization process. Submissions which are inconsistent with any element of the policy will be considered. However, applicants seeking such consideration should provide supporting rationale for how such deviation from the policy would be in the public interest.

If no Detailed Submissions are received in Phase II for either of the spectrum blocks A or B, then, subject to existing eligibility requirements, authorization of the unassigned block will be on a first-come, first-served basis until the commencement of the Round Two authorization process for frequency blocks C, D, E and F.

If no Detailed Submissions are received in Phase II for both of the spectrum blocks A and B, then eligibility requirements will be relaxed to permit local telephone and cable television distribution network providers to be authorized for one 500 MHz block until the commencement of the Round Two authorization process for frequency blocks C, D, E and F.

In these cases, applicants must satisfy the information requirements set out in this document.

Industry Canada will make available to the public a list of the blocks and service areas applied for as soon as possible following the receipt of Detailed Submissions in Phase II of Round One of this current process.

6.1 Round One: Three Phase Process for Authorizing Blocks A & B

The comparative selection and authorization process to be used for the introduction of LMCS is conducted in three phases. Phase I announces the process and requests Expressions of Interest from applicants. A list of all those who expressed interest and the service areas will be made available to the public as soon as possible after the filing date. This provides applicants with an opportunity to be aware of other interested parties and to identify those with whom they may wish to form alliances for the purposes of making Detailed Submissions in Phase II.

In Phase II, Detailed Submissions are filed by applicants. During this phase, Industry Canada evaluates the submissions and reserves the right to request additional information for the clarification or resolution of issues arising from this evaluation. Any such requests will be made in writing to the applicants with responses to be in writing.

Direct contact with departmental officials concerning the merits of any submission will not be entertained during this phase of the process. This does not limit contact with departmental officials concerning the process in general or for other unrelated issues.

In Phase III, successful applicants will be authorized to deploy their systems by installing their hub stations. Successful applicants will be required to obtain the necessary approvals related to antenna structure clearance and environmental issues including safety and land use matters.

The goal of the process is to ensure the best radiocommunication facilities and services are made available for Canadians and that the facilities and services are developed and established in an orderly and timely fashion. To this end, and given the expressed views of interested parties advocating an expeditious process, the Phase I and Phase II are being run concurrently for LMCS applications.

6.2 Public Access to Documents

Industry Canada recognizes that certain portions of the Phase I and Phase II submissions may be considered confidential by an applicant. In these instances, applicants must clearly identify the information considered confidential and, if claiming confidentiality, must submit both a non-confidential and a confidential version of submissions. Industry Canada will make the non-confidential submissions available for viewing for a period of one year after the completion of each phase of the selection and authorization process at its libraries located at 365 Laurier Avenue West, Ottawa and in its offices in Moncton, Montreal, Toronto, Winnipeg and Vancouver. During the same period, copies of the non-confidential submissions will be made available via a commercial printing service which will charge a reasonable fee for this service. After this period, arrangements for the viewing of the non-confidential submissions may be made through the office of the Director General, Radiocommunications and Broadcasting Regulatory Branch.

Applicants should be aware that information which they have identified as being confidential may be subject to release upon request under the Access to Information Act and should therefore refer to this Act. As a guide in determining whether information could be released pursuant to such a request, a list of some of the questions used as part of any review under the Access to Information Act is provided in Appendix C.

6.3 Evaluation Criteria

The information filed in response to this document will be evaluated against the criteria below for the purpose of providing analysis and advice to the Minister of Industry in his selection of successful applicants. The criteria of competitive strategy and innovation are very significant elements of the LMCS Policy and will be accorded greater emphasis during the evaluation process as compared to the other enumerated criteria.

6.3.1 Competitive Strategy

The enhancement of the efficiency and competitiveness of Canadian telecommunications, at the national and international levels, is an objective of Canadian telecommunications policy that LMCS is expected to advance. This includes the stimulation of competitive and comprehensive service offerings that provide additional choice and other consumer benefits in the provision of high capacity broadband multipoint services. These new service offerings and distribution facilities may compete with existing local telephone or cable distribution networks, products and services.

Applicants who demonstrate how they will achieve this objective will be favoured.

Order in Council P.C. 1994-1689, dated October 8, 1994, contains clear statements of government policy pertaining to competition between facilities-based carriers. Two of the policy statements contained in PC 1994-1689 that are directly applicable to LMCS are:

i. the facilities and capacity of telecommunications carriers under federal jurisdiction, ..., be made available for lease, resale and sharing by service providers and other carriers on a non-discriminatory basis; and

ii. facilities and capacity, including support structures should, to the extent practicable, be provided in a manner that allows users to use and pay for only those parts of the network infrastructure that they require.

Applicants who indicate they will respect Industry Canada's policy of encouraging shared use of facilities or antenna sites among telecommunications service providers, where this is practical and where appropriate commercial agreements can be reached, will be favoured. Further, applicants who indicate their intention to respect these policies by undertaking to make their future LMCS and existing telecommunications facilities available to third parties on an unrestricted non-discriminatory basis will be favoured.

6.3.2 Innovation

The provision of additional and innovative services is an objective of Canadian telecommunications policy which LMCS is expected to support. This process seeks to promote entry by those who have already undertaken innovation to prepare them to provide LMCS facilities to the public at an early date. Applicants who propose to provide facilities for the delivery of innovative and value added services will be favoured as will those who demonstrate an ability to implement innovations that will enhance the privacy protection enjoyed by users of LMCS. Further, applicants that outline experimentation they have undertaken which has led to innovation will be favoured. Applicants should be able to substantiate in reasonable detail their ability to deliver such services.

6.3.3 Research and Development and Economic Benefits

The promotion of research and development[2] activities and the concomitant development of expertise for international trade and investment opportunities is an objective of Canadian telecommunications policy. Research and development allows Canadian suppliers of services and products to gain experience with new technologies and new services. Further, wireless networks in general are expected to play key roles in the development of the Canadian Information Highway and the advancement of its objectives; namely, equality of access, competition and increased productivity and enhancement of the personal lives of Canadians. The economic activities related to LMCS should enable Canadians to take advantage of novel means by which to increase their productivity and enhance their personal lives.

Accordingly, applicants who will foster the development of leading edge products and applications through their research and development activities and other initiatives related to LMCS and whose proposed service offerings and products will provide economic benefits to Canadians will be favoured.

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[2] The definition of research and development, for the purposes of this document, is as defined by Revenue Canada.

6.3.4 Coverage

An objective of this policy is to ensure that LMCS services are provided to the greatest number of Canadians in a timely manner. Applicants who propose system implementation in a timely manner and offer coverage to the most households located within the geographic area requested will be favoured.

6.3.5 Demonstrated Competencies

Applicants who demonstrate institutional, financial, economic and technical capabilities that would support the establishment and operation of their proposed LMCS facilities will be favoured. In addition, an applicant must clearly demonstrate that it has the necessary financial resources to implement its proposed plans. Industry Canada will assess proposed financial plans with a view to their credibility.

6.3.6 Ownership and Control

The reinforcement of Canadian sovereignty and cultural identity is an objective of Canadian telecommunications policy. LMCS providers must comply with the eligibility criteria set out in section 16 the Telecommunications Act and with the Canadian Telecommunications Common Carrier Ownership and Control Regulations.

6.4 Phase I: Expressions of Interest

Expressions of interest for the implementation of LMCS in Canada are to be filed with Industry Canada on or before April 1, 1996. By this date, applicants are to provide in writing sixteen (16) copies of their expressions of interest. Should applicants consider portions of their Expressions of Interest to be confidential, they are to provide in writing sixteen (16) copies of their confidential Expressions of Interest and eight (8) copies of their non-confidential Expressions of Interest. A list of those who applied, including their affiliates, what was applied for, and copies of the non-confidential Expressions of Interest will be made available to the public as soon as possible after the closing date for receipt of the expressions of interest. Expressions of interest should provide the following information.

6.4.1 Eligibility

Applicants must provide a detailed description of their corporate ownership and control structure and an attestation that they meet or will meet the ownership and control requirements of the Telecommunications Act. This should include copies of any agreements related to ownership and control, in fact, of the company, a list of the principals, affiliates and consortium members, if applicable, and their backgrounds. A detailed list of the relevant information required is provided in Appendix D. In addition, applicants must provide a statement concerning their eligibility with respect to section 5.3 of this policy.

6.4.2 Frequency Block and Service Area

Applicants must identify the specific frequency block(s) and service area(s), for which they are applying. Table 1 of Appendix B (maps at Appendix /annex E) provides a list of the sixty-six service areas which may be used by applicants to identify the blocks and areas. Table 2 provides a definition of the service areas.

6.4.3 Comments on Proposed Annual Authorization Fee

As noted in section 5.5: Round One Fees, comments on the proposed fees are also solicited from the public by April 1, 1996.

6.5 Phase II: Detailed Submission

Detailed submissions must be filed with Industry Canada on or before May 15, 1996. By this date, applicants are to provide in writing sixteen (16) copies of their detailed submissions. Should an applicant be applying for more than one service area, and where there is information common to all areas and other information specific to each area, applicants should submit sixteen (16) copies of the common information and sixteen (16) copies of the specific information for each service area. Should applicants consider portions of their Detailed Submissions to be confidential, they are to provide in writing sixteen (16) copies of their confidential Detailed Submissions as noted above and eight (8) copies of their non-confidential Detailed Submissions.

6.5.1 Information to be Submitted

Based on the evaluation criteria, detailed submissions should include the following information.

6.5.1.1 Competitive Strategy

Applicants should address how their marketing plans, supported by concrete marketing research, and implementation strategies will enhance the competitive delivery of products and services to Canadians by improving quality, increasing availability, or reducing prices, without limiting other benefits.

6.5.1.2 Innovation

Applicants should address in their applications how their proposed offerings would meet foreseen needs, existing needs in a new or improved manner, or demands not currently being adequately satisfied. Included within the scope of the description should be the manner in which proposed facilities could address niche markets. As well, applicants should outline any experimentation they have undertaken which has led to innovation for proposed undertakings.

6.5.1.3 Research and Development and Economic Benefits

Applicants should address the following in their submission, where applicable:

i. the research and development activities related to LMCS products and applications undertaken, planned, or supported. These activities could be in-house, or through partnerships or arrangements with developers of products and applications;

ii. the percentage of adjusted gross revenues[3] that will be spent on research and development;

iii. a research and development plan for the initial five (5) years;

iv. any other initiatives whose effect would be the enhancement of Canada's technological capacity to develop, produce or market wireless products and services related to LMCS for domestic and world markets;

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[3]Adjusted gross revenues are defined as total service revenues less inter-carrier payments, bad debt, third party commissions and provincial and goods and services taxes collected.

v. all expected direct investments to be made; and

vi. the expected creation of direct jobs and growth.

6.5.1.4 Coverage

Applicants should outline their system implementation plans in each service area in which they are applying for the initial five (5) years. These plans must include an annual schedule outlining the approximate number of stations that will be installed and in operation and the number of households to be covered for each service area such that the desired level of service is provided.

6.5.1.5 Demonstrated Competence

Applicants should outline their competencies and financial capabilities. The information should include, but not be limited to, that listed below. Note that the key underlying assumptions to the financial plan are expected to be provided in sufficient detail to enable verification of their plausibility.

i. Experience in the installation and operation of telecommunications systems

ii. Management experience and capability

iii. Existing staff, both technical and non-technical, and their experience and expertise in support of all aspects of system implementation, marketing, sales activities, equipment availability, management, and technology

iv. Domestic and international alliances with other companies or organizations for the establishment of the proposed facilities

v. Institutional, economic and/or technical arrangements with other companies or organizations in support of system implementation and operation

vi. Consolidated audited financial statements for the past three full fiscal years, if applicable

vii. Current interim financial statements

viii. Audited financial statements of the parent company or affiliates for the past three full fiscal years, if applicable

ix. A five year financial plan for the applicant and the proposed system, including revenues, expenditures, and detailed financial forecasts for this period, complete with the key underlying assumptions (in sufficient detail to enable verification of plausibility)

x. Evidence that other necessary financing is obtainable on reasonable terms and conditions, if applicable

6.6 Conditions of Authorization

Elements of government policy directly applicable to LMCS will be made conditions of authorization. These conditions may include that holders of LMCS authorizations:

i. must make available the facilities and capacity for lease, resale and sharing to all other telecommunications carriers and to third party users on an unrestricted, non-discriminatory basis;

ii. must provide their facilities and capacity, including support structures, in a manner that allows customers to use and pay for only those elements that they require;

iii. must implement their system as outlined in their submissions;

iv. must fulfil the five year R&D commitments outlined in their submission;

v. must file a detailed annual report outlining progress made in all areas for the first five years;

vi. must follow the procedures outlined in Client Procedures Circular CPC 2-0-03 -- Environmental Process, Radiofrequency Fields and Land-Use Consultation;

vii. must obtain approval for their proposed antenna support structures with respect to hazards to air navigation - the procedures are outlined in the Client Procedures Circular CPC-2-0-02 -- Antenna Structure Clearance;

viii. must comply with the eligibility criteria as set out in section 16 of the Telecommunications Act and the Canadian Telecommunications Common Carrier Ownership and Control Regulations;

ix. must notify the Minister in advance of any change in the ownership or control which would have a material effect on ownership or control in fact, including any change to arrangements and/or agreements with any other entity - this includes any change to any agreement submitted during the Department's evaluation of the submissions.

7. Filing Address

Applicants should submit Phase I Expressions of Interest no later than April 1, 1996 to the office of:

Director General
Radiocommunications and Broadcasting Regulatory Branch
Industry Canada
Journal Tower North
300 Salter Street
Ottawa, Ontario K1A 0C8

Phase II Detailed Submissions must be submitted on or before May 15, 1996 to the same address given above.

8. Further Information

General inquiries, strictly on clarification of the policy or on procedural requirements and procedures contained in this document, must be submitted no later than April 1, 1996 in writing to the office of:

Director General
Radiocommunications and Broadcasting Regulatory Branch
Industry Canada
Journal Tower North
300 Salter Street
Ottawa, Ontario KEA 0C8

or by fax to 613-952-9871, phone 613-998-3768.

All questions received and responses will be made public as quickly as possible thereafter. There will be no individual responses and the parties requesting clarification will remain anonymous. All questioners and any other know interested parties will be sent the questions and the responses.

Jan Skora
Director General
Radiocommunication and Broadcasting
Regulatory Branch

Michael Helm
Director General
Telecommunications Policy
Branch

Appendix A Technical and Operational Requirements for LMCS

ITU Requirements (25.25-27.5 GHz)

In the ITU Radio Regulations the band 25.25-27.5 GHz is allocated on a coprimary basis to Fixed (FS), Mobile and Inter-Satellite (IS) services. The current ITU regulations applicable to this band for the fixed service are as follows:

2504A (WARC 92) As far as practicable, sites for transmitting stations, in the fixed or mobile service, employing maximum values of equivalent isotropic radiated power (e.i.r.p) density exceeding 24 dBW in any 1 MHz band in the band 25.25-27.5 GHz should be selected so that the direction of maximum radiation of any antenna will be at least 1.5° away from the geostationary-satellite orbit, taking into account the effect of atmospheric refraction[1].

2504A.1 (WARC 92) [1] The provisions, of No. 2504A shall apply until such time as the CCIR has made a recommendation on the e.i.r.p. density limits which should apply in the band.

2505 § 3. (1) The maximum equivalent isotropically radiated power (e.i.r.p) of a station in the fixed or mobile service shall not exceed +55 dBW.

2506 (4) The power delivered by a transmitter to the antenna of a station in the fixed or mobile service in frequency bands above 10 GHz shall not exceed +10 dBW.

The above regulations were based on the use of these bands by point-to-point systems in the fixed service. Since the band can also be used for high density point-to-multipoint systems, the following measures are needed to comply with the intent of these regulations.

Application of RR 2504A

It should be noted that this Radio Regulation (RR) is under review with a view to ensure protection to Intersatellite Data Relay Satellite (DRS) systems, operating on the geostationary orbit (GSO), and to consider the need to increase the e.i.r.p. of point-to-point FS systems beyond 24 dBW/MHz under rain conditions. There is no specific consideration given at this time to develop separate regulations for LMCS type